

BIO392 survival project

Sarcoma

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sarcoma

- *malignant tumor of mesenchymal origin*
 - bone sarcoma
 - soft tissue sarcoma
- **symptoms** depend on tumor location
 - generally: local swelling & pain
- **diagnosis:** X-ray, CT, MRI, biopsy + analysis, ..
- **treatment** depends on grade and location
 - surgery, chemotherapy, radiation therapy, ..

prognosis

- **factors:**

- tumor size
- local tumor spread
- metastases
- tumor grade
- tumor location
- mitotic rate

- **5-year survival:**

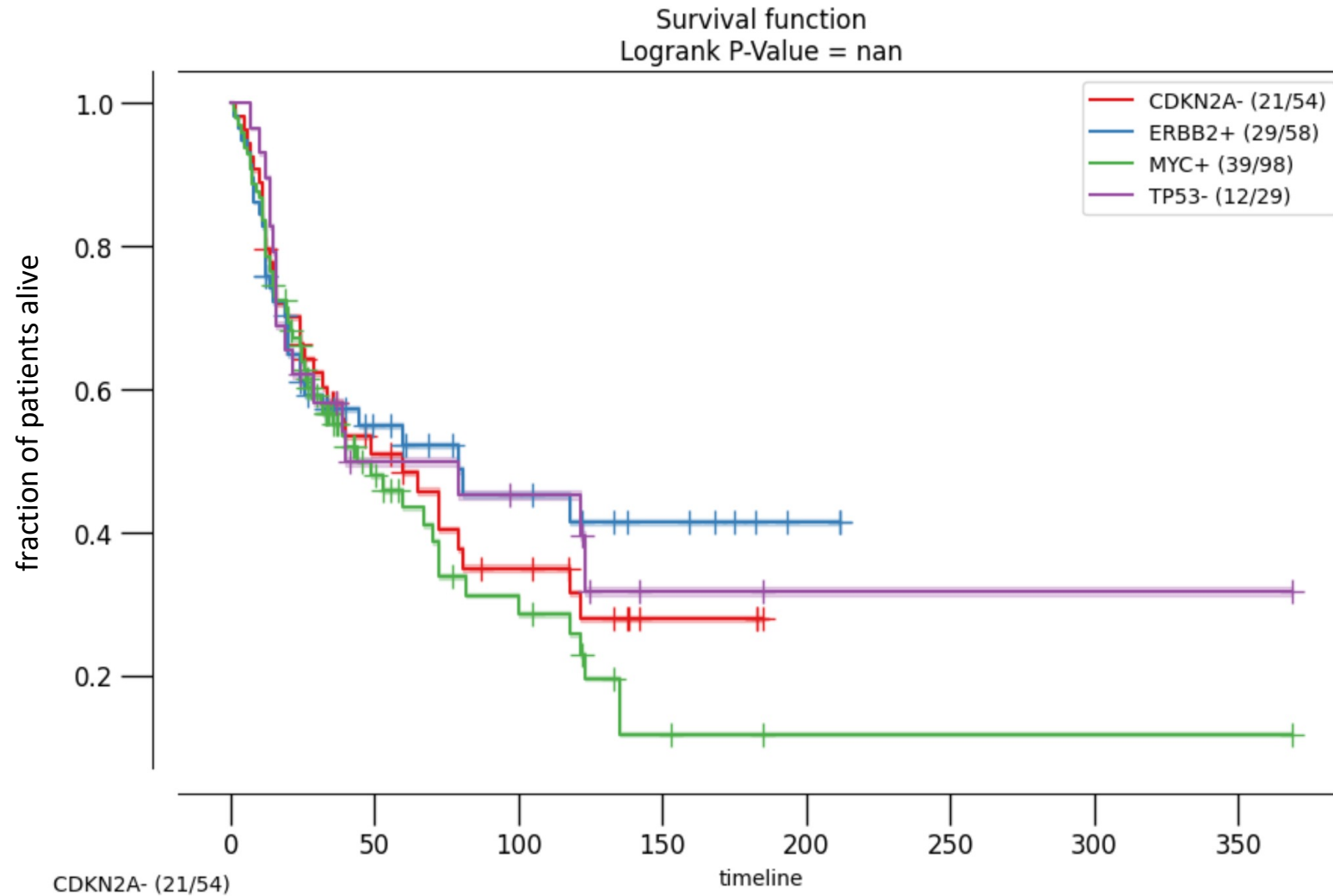
- bone sarcomas: 67.4%
- soft tissue sarcomas: 65.4%

queried genotypes

- ERBB2+ = cnv gain of ERBB2
 - ERBB2: oncogene on chr17
- TP53- = cnv loss of TP53
 - TP53: tumor supressor gene chr17
- MYC+ = cnv gain of MYC
 - MYC: oncogene chr8
- CDKN2A- = cnv loss of CDKN2A
 - CDKN2A: tumor supressor gene chr9

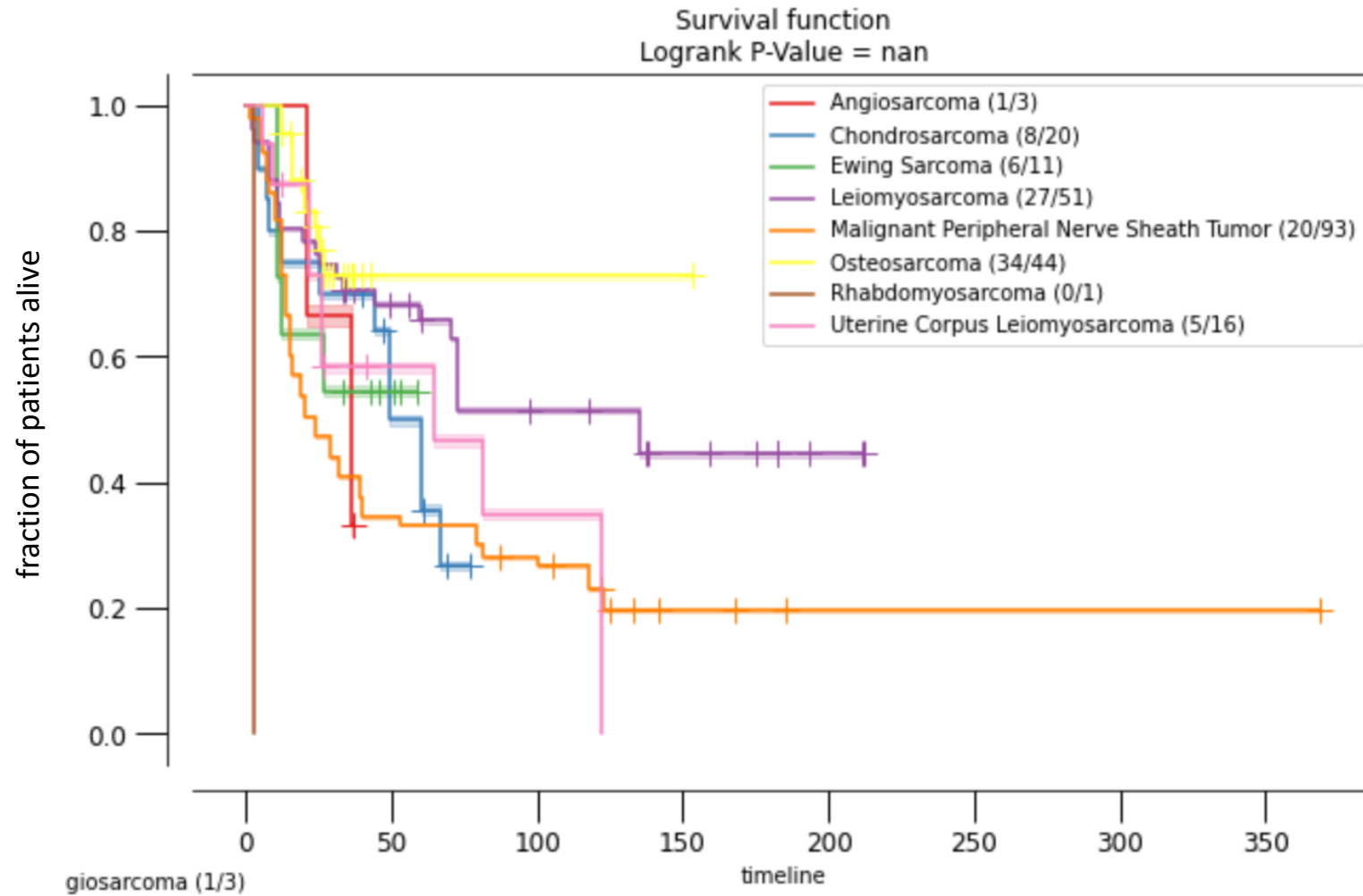
Does the survival of sarcoma patients depend
on the genotype?

Kaplan-Meier plot vs. genotype



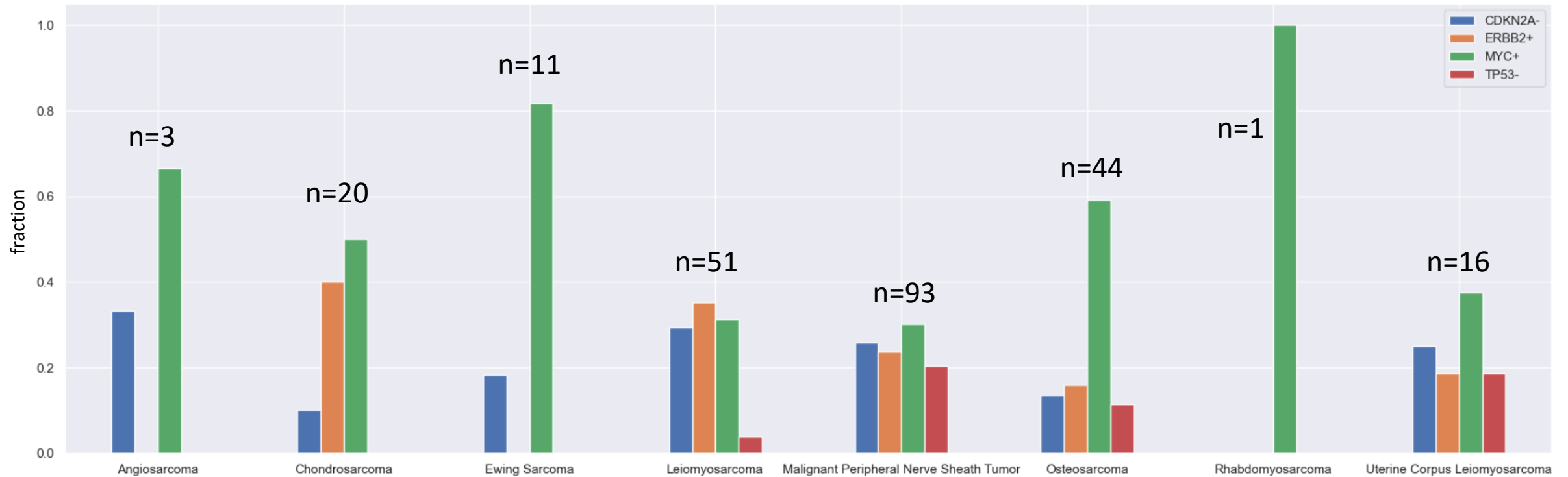
Does the survival of sarcoma patients depend
on the tumor type?

Kaplan-Meier plot vs. different tumors



Do the genotypes of the tumors differ?

mutated genes vs. tumor type



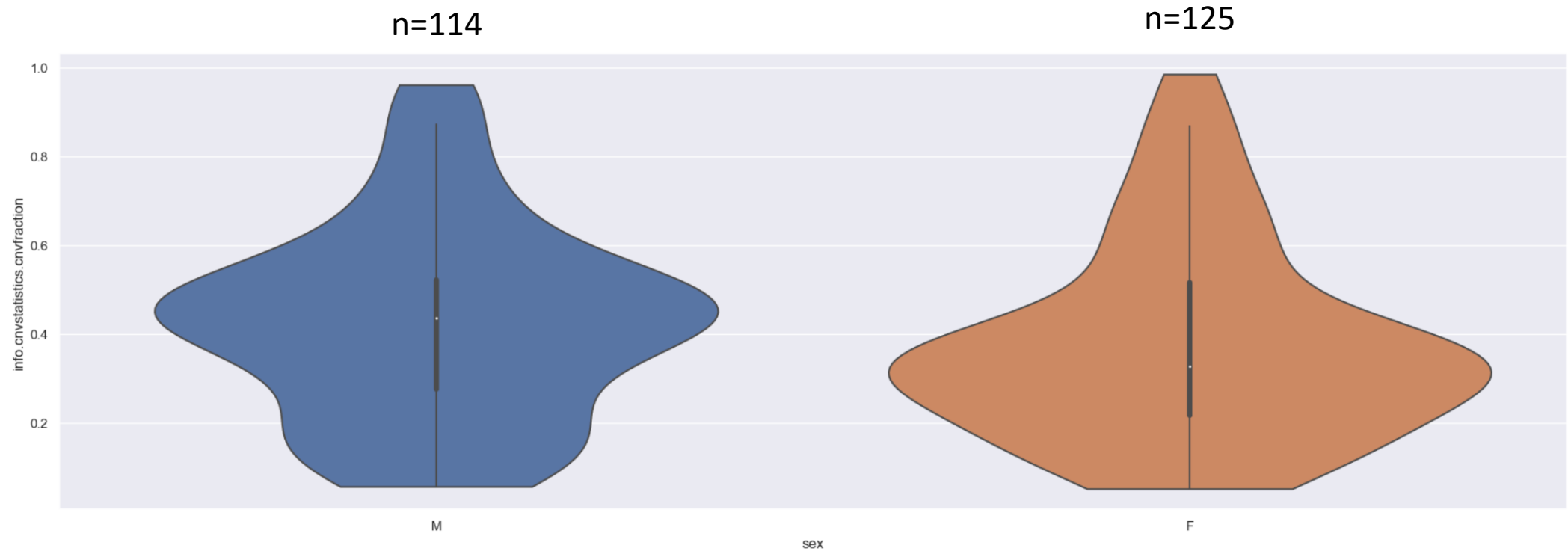
Do the genotypes of the tumors differ?

too few samples

Osteosarcoma seems to be associated with MYC+

Is the cnv fraction of the genome correlated
sex?

CNV-fractions and sex

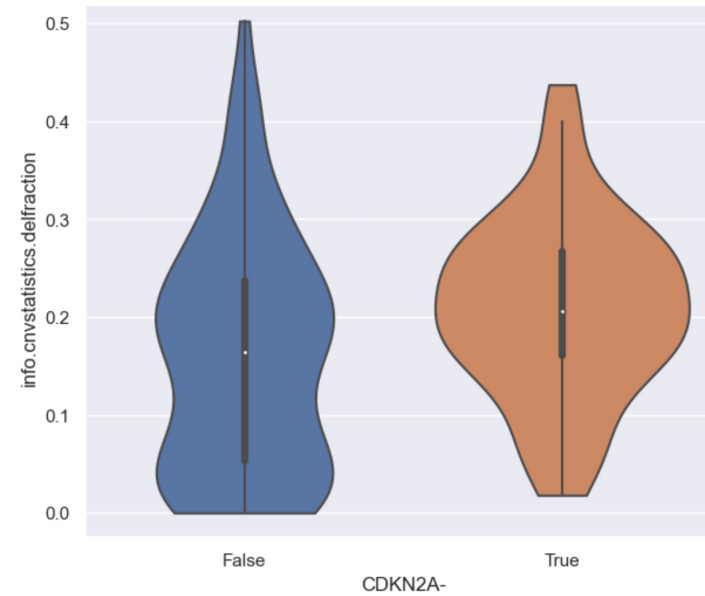
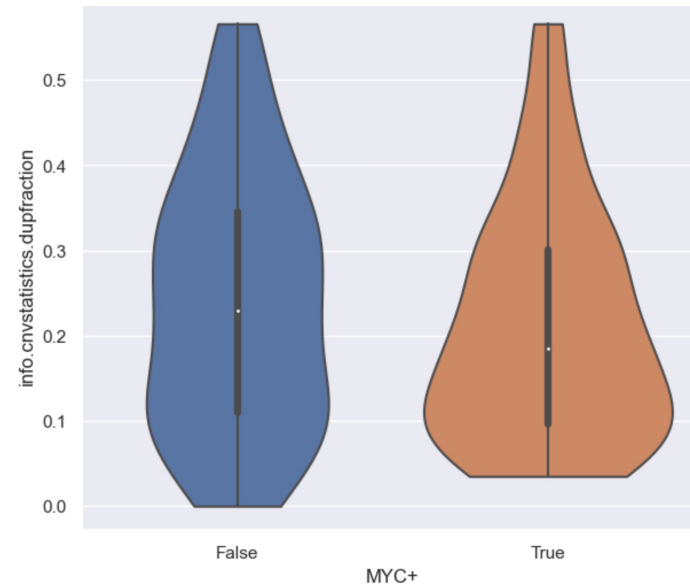
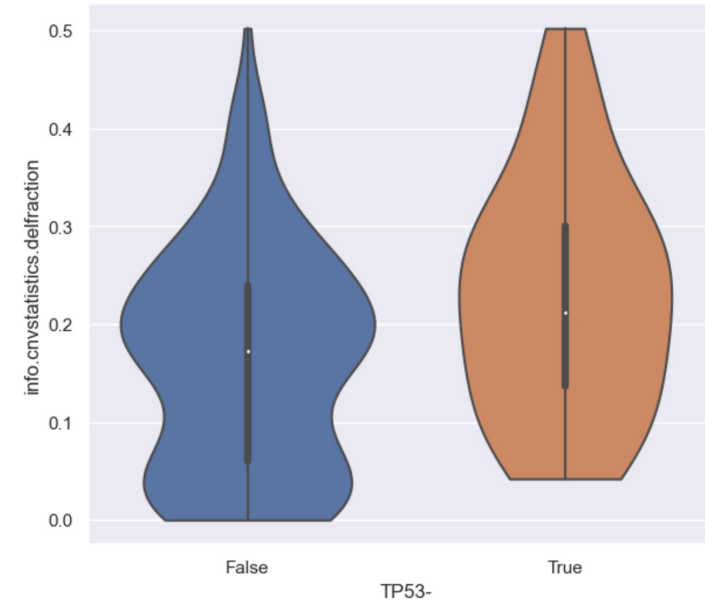
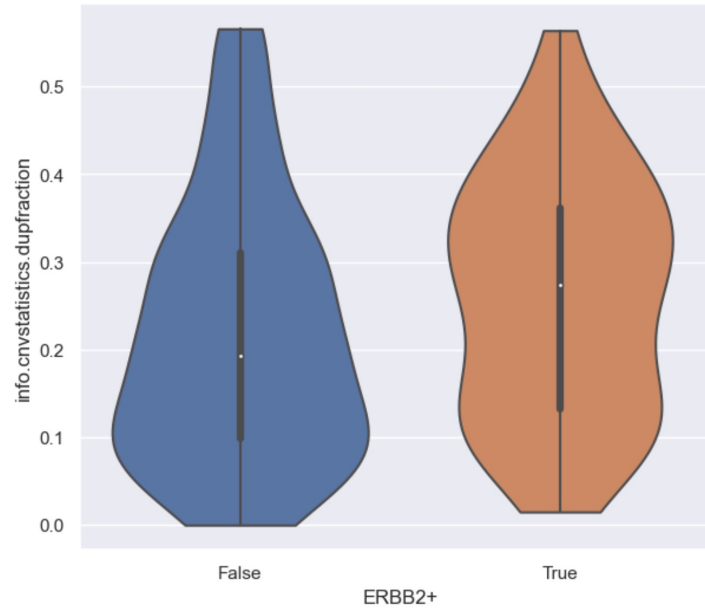


Is the cnv fraction of the genome correlated sex?

no.

Is the duplication/deletion fraction of the genome correlated with our genotypes?

genotype vs. control



Is the duplication/deletion fraction of the genome
correlated with our genotypes?

no.

If you have any questions, please drop us an [email](#)

au revoir

SOFT TISSUE (STS) AND BONE SARCOMAS

Fibrosarcoma

Infantile or Adult
Fibrous connective tissue

Synovial sarcoma

Connective tissue

Desmoplastic small round cell tumour

Soft tissue of abdomen

Malignant peripheral nerve sheath tumour

Nerves

Leiomyosarcoma

Smooth muscle

Rhabdomyosarcoma

ARMS or ERMS
Skeletal muscle

Liposarcoma

Myxoid or WD/DDLPS
Adipose tissue

Gastrointestinal stromal tumours

Gastrointestinal tract

Osteosarcoma

Bone

Ewing's sarcoma

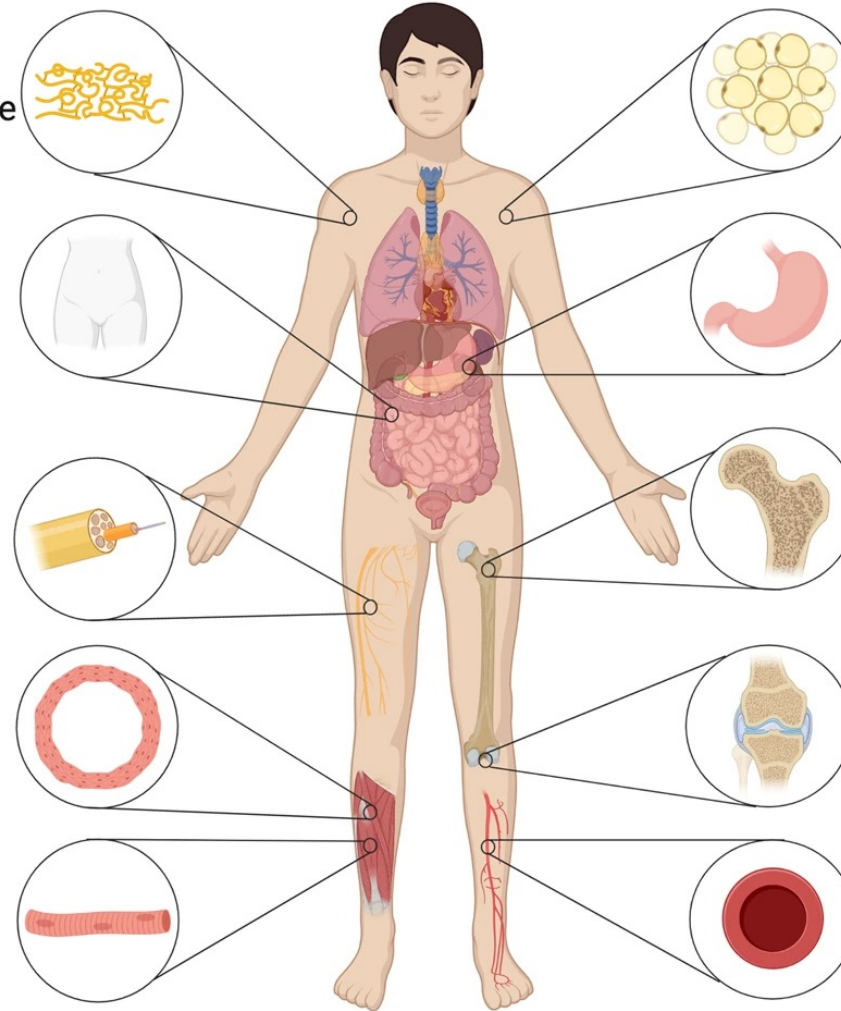
Bone or STS

Chondrosarcoma

Myxoid or other
Cartilage

Angiosarcoma

Blood vessels



Does the survival of patients depend on the tumor type?

Kaplan-Meier plot of Malignant Peripheral Nerve Sheath Tumor vs. genotype

